

Response to Office Action November 21, 2007

Appl. No. 10/526,786

Page 2

AMENDMENT TO THE CLAIMS:

Please amend claim 21 as follows:

1-20. (Canceled)

21. (Currently Amended) A vaporizer for CVD comprising:

a plurality of pipes for a plurality of raw-material solutions, each of said plurality of pipes supplying the plurality of raw-material solutions separately from one another;

a pipe for a carrier gas, said pipe being provided around an outside of said plurality of pipes so as to contain said plurality of pipes supplying the raw-material solutions, while said pipe allowing the carrier gas under pressurization to flow thereinside and on the outside of each of said plurality of pipes;

an orifice provided on a leading end of said pipe for the carrier gas, said orifice being spaced away from leading ends of said plurality of pipes for the plurality of raw-material solutions;

a dispersing portion provided between the leading ends of said plurality of pipes for the raw-material solutions and said orifice, said dispersing portion mixing the plurality of raw-material solutions with the carrier gas such that the raw material solutions are atomized;

a vaporizing tube connected to said leading end of said pipe for the carrier gas, said vaporizing tube being connected to the inside of said pipe for the carrier gas via said orifice;

a cleaning mechanism cleaning at least one of said leading end of said pipe for the carrier gas, said orifice, and said vaporizing tube; and

a heating means for heating said vaporizing tube, and wherein

the plurality of raw-material solutions and the carrier gas mixed one another at said dispersing portion are ejected to said vaporizing tube at a fast speed.

22. (Previously Presented) The vaporizer for CVD according to claim 21, further comprising a reaction chamber connected to said vaporizer to form a solution-vaporization CVD apparatus.

23. (Previously Presented) The vaporizer for CVD according to claim 22, wherein a deposition is carried out with the plurality of raw-material solutions used, the plurality of raw-material solutions being vaporized by said vaporizing tube.

24. (Previously Presented) The solution-vaporization CVD apparatus according to claim 23, wherein:

the solution-vaporization CVD apparatus is equipped with a plurality of vaporizers for CVD; and some of said plurality of vaporizers for CVD are respectively in a cleaned condition cleaned by said cleaning mechanism, while others thereof are respectively in operated conditions; and

the plurality of vaporized raw-material solutions are continuously supplied to said reaction chamber by swapping said plurality of vaporizers for CVD in the operated conditions for those in the cleaned conditions as time advances.

25. (Previously Presented) The vaporizer for CVD according to claim 21, further comprising a monitoring mechanism for monitoring a pressure of the carrier gas in an inside of said pipe for the carrier gas.

26. (Previously Presented) The vaporizer for CVD according to claim 25, wherein said cleaning mechanism cleans said leading end of said pipe for the carrier gas and said orifice by supplying at least a solution thereto.

27. (Previously Presented) The vaporizer for CVD according to claim 26, further comprising a reaction chamber connected to said vaporizer to form a

solution-vaporization CVD apparatus, and wherein a deposition is carried out with the plurality of raw-material solutions used, the plurality of raw-material solutions being vaporized by said vaporizing tube.

28. (Previously Presented) The solution-vaporization CVD apparatus according to claim 27, wherein:

the solution-vaporization CVD apparatus is equipped with a plurality of vaporizers for CVD; and

some of said plurality of vaporizers for CVD are respectively in a cleaned condition cleaned by said cleaning mechanism, while others thereof are respectively in operated conditions; and

the plurality of vaporized raw-material solutions are continuously supplied to said reaction chamber by swapping said plurality of vaporizers for CVD in the operated conditions for those in the cleaned conditions as time advances.

29. (Previously Presented) The vaporizer for CVD according to claim 25, further comprising a reaction chamber connected to said vaporizer to form a solution-vaporization CVD apparatus.

30. (Previously Presented) The vaporizer for CVD according to claim 29, further comprising a reaction chamber connected to said vaporizer to form a solution-vaporization CVD apparatus, and

wherein a deposition is carried out with the plurality of raw-material solutions used, the plurality of raw-material solutions being vaporized by said vaporizing tube.

31. (Previously Presented) The solution-vaporization CVD apparatus according to claim 30 wherein:

the solution-vaporization CVD apparatus is equipped with a plurality of

vaporizers for CVD; and

some of said plurality of vaporizers for CVD are respectively in a cleaned condition cleaned by said cleaning mechanism, while others thereof are respectively in operated conditions; and

the plurality of vaporized raw-material solutions are continuously supplied to said reaction chamber by swapping said plurality of vaporizers for CVD in the operated conditions for those in the cleaned conditions as time advances.

32. (Previously Presented) The vaporizer for CVD according to claim 21, wherein said cleaning mechanism cleans said leading end of said pipe for the carrier gas and said orifice by supplying at least a solution thereto.

33. (Previously Presented) The vaporizer for CVD according to claim 32, further comprising a reaction chamber connected to said vaporizer to form a solution-vaporization CVD apparatus.

34. (Previously Presented) The vaporizer for CVD according to claim 33, wherein a deposition is carried out with the plurality of raw-material solutions used, the plurality of raw-material solutions being vaporized by said vaporizing tube.

35. (Previously Presented) The solution-vaporization CVD apparatus according to claim 34, wherein:

the solution-vaporization CVD apparatus is equipped with a plurality of vaporizers for CVD; and

some of said plurality of vaporizers for CVD are respectively in a cleaned condition cleaned by said cleaning mechanism, while others thereof are respectively in operated conditions; and

the plurality of vaporized raw-material solutions are continuously supplied to said reaction chamber by swapping said plurality of vaporizers for CVD in the

Response to Office Action November 21, 2007

Appl. No. 10/526,786

Page 6

operated conditions for those in the cleaned conditions as time advances.

36.-40. (Canceled)